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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,255	10/09/2003	Masaru Fuse	2003_1421	7497

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/681,255	FUSE, MASARU
	Examiner	Art Unit
	Hanh Phan	2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 09 October 2003.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-5,16-22 and 28-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3-5,16-22 and 28-34* is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/28/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters:

IN THE DRAWING:

The drawings are objected to because in Figure 14 (Prior Art), the label of "demodulator 1408" should be changed into --modulator 1408--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

IN THE SPECIFICATION:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract exceeds 150 words in length. Correction is required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

2. **REASONS FOR ALLOWANCE**:

Claims 3-5 are allowable because the instant application is directed to an nonobvious improvement over the invention described in patent No. 4,768,186 to Bodell. The improvement comprises a system for optically transmitting a frequency-multiplexed signal with a plurality of signals frequency-multiplexed, comprising: a detector, provided with the frequency-multiplexed signal, outputting a detection signal corresponding to an amplitude variation of the frequency-multiplexed signal; an amplitude controller adjusting an amplitude of said frequency-multiplexed signal by referring to the detection signal outputted from said detector, and outputting a suppressed multiplexed signal, which is the frequency-multiplexed signal with an instantaneous amplitude variation suppressed; a modulator modulating the suppressed multiplexed signal outputted from said amplitude controller to produce a predetermined modulated signal; a detection signal modulator modulating the detection signal outputted from said detector to produce a modulated detection signal; a multiplexer multiplexing the modulated signal outputted from the modulator and the modulated detection signal outputted from said detection signal modulator to produce a multiplexed signal; an optical transmitter converting the multiplexed signal outputted from said multiplexer into an optical signal; an optical receiver converting the optical signal sent from said optical transmitter into an electrical signal; a separator separating the modulated signal and the modulated detection signal from the electrical signal outputted from said optical receiver; a demodulator demodulating the modulated signal outputted from said separator to output the suppressed multiplexed signal; a detection signal demodulator demodulating the modulated detection signal outputted from said separator to output the detection signal; and an amplitude adjuster adjusting, by referring to the detection signal outputted from said detection signal demodulator, an amplitude of the suppressed multiplexed signal outputted from said demodulator to output the frequency-multiplexed signal corresponding to the frequency-multiplexed signal provided to said detector. This patentable distinction is included in independent claim 3.

Claims 16-18 are allowable because the instant application is directed to an nonobvious improvement over the invention described in patent No. 4,768,186 to Bodell. The improvement comprises a system for optically transmitting a frequency-multiplexed signal with a plurality of signals frequency-multiplexed, comprising: a detector, provided with the frequency-multiplexed signal, outputting a detection signal corresponding to an amplitude variation of the frequency-multiplexed signal; an amplitude controller adjusting an amplitude of said frequency-multiplexed signal by referring to the detection signal outputted from said detector, and outputting a suppressed multiplexed signal, which is the frequency-multiplexed signal with an instantaneous amplitude variation suppressed; a detection signal modulator modulating the detection signal outputted from said detector to produce a modulated detection signal; a multiplexer multiplexing the suppressed multiplexed signal outputted from said amplitude controller and the modulated detection signal outputted from said detection signal modulator to produce a multiplexed signal; a modulator modulating the multiplexed signal outputted from said multiplexer to produce a predetermined modulated signal; an optical transmitter converting the modulated signal outputted from said modulator into an optical signal; an optical receiver converting the optical signal sent from said optical transmitter into an electrical signal; a demodulator demodulating the electrical signal outputted from said optical receiver to produce a demodulated signal; a separator separating the suppressed multiplexed signal and the modulated detection signal from the demodulated signal outputted from said demodulator; a detection signal demodulator demodulating the modulated detection signal outputted from said separator to output the detection signal; and an amplitude adjuster adjusting, by referring to the detection signal outputted from said detection signal demodulator, an amplitude of the suppressed multiplexed signal outputted from said separator to output the frequency-multiplexed signal corresponding to the frequency-multiplexed signal provided to said detector. This patentable distinction is included in independent claim 16.

Claims 19-22 are allowable because the instant application is directed to an nonobvious improvement over the invention described in patent No. 4,768,186 to Bodell. The improvement comprises a system for optically transmitting a frequency-multiplexed signal with a plurality of signals frequency-multiplexed, comprising: a detector, provided with the frequency-multiplexed signal, outputting a detection signal corresponding to an amplitude variation of the frequency-multiplexed signal; an amplitude controller adjusting an amplitude of said frequency-multiplexed signal by referring to the detection signal outputted from said detector, and outputting a suppressed multiplexed signal, which is the frequency-multiplexed signal with an instantaneous amplitude variation suppressed; a phase adjuster adjusting a phase of the detection signal outputted from said detector to produce a phase-adjusted detection signal; a detection signal modulator modulating the phase-adjusted detection signal outputted from said phase adjuster to produce a modulated detection signal; a multiplexer multiplexing the suppressed multiplexed signal outputted from said amplitude controller and the modulated detection signal outputted from said detection signal modulator to produce a multiplexed signal; a modulator modulating the multiplexed signal to produce a predetermined modulated signal; an optical transmitter converting the modulated signal outputted from said modulator into an optical signal; an optical receiver converting the optical signal sent from said optical transmitter into an electrical signal; a demodulator demodulating the electrical signal outputted from said optical receiver to produce a demodulated signal; a separator separating the suppressed multiplexed signal and the modulated detection signal from the demodulated signal outputted from said demodulator; a detection signal demodulator demodulating the modulated detection signal outputted from said separator to output the phase-adjusted detection signal before modulation; a phase reproducer adjusting a phase of the phase-adjusted detection signal outputted from said detection signal demodulator to output the detection signal before phase adjustment; and an amplitude adjuster adjusting, by referring to the detection signal outputted from said phase reproducer, an amplitude of the suppressed multiplexed signal outputted from said separator to output the frequency-multiplexed signal corresponding to the frequency-multiplexed signal provided to said detector. This patentable distinction is included in independent claim 19.

Claims 28-30 are allowable because the instant application is directed to an nonobvious improvement over the invention described in patent No. 4,768,186 to Bodell. The improvement comprises a system for optically transmitting a frequency-multiplexed signal with a plurality of signals frequency-multiplexed, comprising: a detector, provided with the frequency-multiplexed signal, outputting a detection signal corresponding to an amplitude variation of the frequency-multiplexed signal; an amplitude controller adjusting an amplitude of said frequency-multiplexed signal by referring to the detection signal outputted from said detector, and outputting a suppressed multiplexed signal, which is the frequency-multiplexed signal with an instantaneous amplitude variation suppressed; a detection signal modulator modulating the detection signal outputted from said detector to produce a modulated detection signal; a multiplexer multiplexing the suppressed multiplexed signal outputted from said amplitude controller and the modulated detection signal outputted from said detection signal modulator to produce a multiplexed signal; an optical transmitter converting the multiplexed signal outputted from said multiplexer into an optical signal; an optical receiver converting the optical signal sent from said optical transmitter into an electrical signal; a separator separating the suppressed multiplexed signal and the modulated detection signal from the electrical signal outputted from said optical receiver; a detection signal demodulator demodulating the modulated detection signal outputted from said separator to output the detection signal; and an amplitude adjuster adjusting, by referring to the detection signal outputted from said detection signal demodulator, an amplitude of the suppressed multiplexed signal outputted from said separator to output the frequency-multiplexed signal corresponding to the frequency-multiplexed signal provided to said detector. This patentable distinction is included in independent claim 28.

Claims 31-34 are allowable because the instant application is directed to an nonobvious improvement over the invention described in patent No. 4,768,186 to Bodell. The improvement comprises a system for optically transmitting a frequency-multiplexed signal with a plurality of signals frequency-multiplexed, comprising: a detector, provided with the frequency-multiplexed signal, outputting a detection signal corresponding to an amplitude variation of the frequency-multiplexed signal; an amplitude controller adjusting an amplitude of said frequency-multiplexed signal by referring to the detection signal outputted from said detector, and outputting a suppressed multiplexed signal, which is the frequency-multiplexed signal with an instantaneous amplitude variation suppressed; a phase adjuster adjusting a phase of the detection signal outputted from said detector to produce a phase-adjusted detection signal; a detection signal modulator modulating the phase-adjusted detection signal outputted from said phase adjuster to produce a modulated detection signal; a multiplexer multiplexing the suppressed multiplexed signal outputted from said amplitude controller and the modulated detection signal outputted from said detection signal modulator to produce a multiplexed signal; an optical transmitter converting the multiplexed signal outputted from said multiplexer into an optical signal; an optical receiver converting the optical signal sent from said optical transmitter into an electrical signal; a separator separating the suppressed multiplexed signal and the modulated detection signal from the electrical signal outputted from said optical receiver; a detection signal demodulator demodulating the modulated detection signal outputted from said separator to output the phase-adjusted detection signal; a phase reproducer adjusting a phase of the phase-adjusted detection signal outputted said detection signal demodulator to output the detection signal before phase adjustment; and an amplitude adjuster adjusting, by referring to the detection signal outputted from said phase reproducer, an amplitude of the suppressed multiplexed signal outputted from said separator to output the frequency-multiplexed signal corresponding to the frequency-multiplexed signal provided to said detector. This patentable distinction is included in independent claim 31.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fuse (US Patent No. 6,486,986) discloses a system for optically transmitting frequency division multiplexed signal.

Davidov et al (US Patent No. 4,959,862) discloses active multichannel video processing hub for optimum transition from fiber to coax.

Fujito et al (US Patent No. 4,722,081) discloses analog optical transmission system.

Maeda et al (US Patent No. 5,351,148) discloses optical transmission system.

Tang (US Patent No. 5,016,242) discloses microwave subcarrier generation for fiber optic systems.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Hanhphan
Hanh Phan
Patent Examiner
Art Unit 2633
10/28/04